CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES DIVISION 1 – PLANNING AND DESIGN

				HCD		D	SA		OSI	HPD									
Adopting agency	BSC	SFM	1	2	1-AC	AC	ss	1	2	3	4	CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
Adopt entire CA chapter	Х																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.101							Χ												
5.102 Definitions							Х												
5.106.8							Χ												
5.106.10							Х												

CHAPTER 5

NONRESIDENTIAL MANDATORY MEASURES

Division 5.1 – PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101 Purpose. The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90° above nadir, and 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES. Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT ZEV) or CNG fueled (Original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 1961 and 1962.

2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49 CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

PZEV. Any vehicle certified by the California Air Resources Board as a Partial Credit Zero Emission Vehicle.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purposes of ridesharing.

Note: Source: Vehicle Code, Division 1, Section 668 **ZEV.** Any vehicle certified to zero-emission standards.

SECTION 5.103 SITE SELECTION (Reserved)

SECTION 5.104 SITE PRESERVATION (Reserved)

SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES (Reserved)

SECTION 5.106 SITE DEVELOPMENT

5.106.1 Storm water pollution prevention plan. For newly constructed projects of less than one acre, develop a Storm Water Pollution Prevention Plan (SWPPP) that has been designed, specific to its site, conforming to the State Storm water NPDES Construction Permit or local ordinance, whichever is stricter, as is required for projects one acre or more. The plan should cover prevention of soil loss by storm water run-off and/or wind erosion, of sedimentation, and/or of dust/particulate matter air pollution.

Note: Assistance with the permit may be obtained from the California State Water Resources Control Board (SWRCB) at: http://www.swrcb.ca.gov/stormwtr/, from a Regional Water Quality Control Board, and at local public works departments.

5.106.4 Bicycle parking and changing rooms. Comply with Sections 5.106.4.1 and 5.106.4.2; or meet local ordinance or the University of California Policy on Sustainable Practices, whichever is stricter.

5.106.4.1 Short-Term bicycle parking. If the project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 100 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

5.106.4.2 Long-Term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include:

- Covered, lockable enclosures with permanently anchored racks for bicycles;
- Lockable bicycle rooms with permanently anchored racks; and
- 3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.5.2 Designated parking. Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TABLE 5.106.5.2

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0–9	0
10–25	1
26–50	3
51–75	6
76–100	8
101–150	11
151–200	16
201 and over	At least 8 percent of total

5.106.5.2.1 Parking stall marking. Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle:

CLEAN AIR VEHICLE

5.106.8 Light pollution reduction. Comply with lighting power requirements in the *California Energy Code*, CCR, Part 6, and design interior and exterior lighting such that zero direct-beam illumination leaves the building site. Meet or exceed exterior light levels and uniformity ratios for lighting zones 1–4 as defined in Chapter 10 of the *California Administrative Code*, CCR, Part 1, using the following strategies:

- Shield all exterior luminaires or provide cutoff luminaires per Section 132 (b) of the California Energy Code.
- 2. Contain interior lighting within each source.
- 3. Allow no more than .01 horizontal lumen footcandles to escape 15 feet beyond the site boundary.
- 4. Automatically control exterior lighting dusk to dawn to turn off or lower light levels during inactive periods.

Exceptions:

- 1. Part 2, Chapter 12, Section 1205.6 for campus lighting requirements for parking facilities and walkways.
- 2. Emergency lighting and lighting required for nighttime security.
- **5.106.10 Grading and paving.** The site shall be planned and developed to keep surface water from entering buildings. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows.

CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.3 – WATER EFFICIENCY AND CONSERVATION

A 1				HCD		DS	SA		OSI	HPD									
Adopting agency	BSC	SFM	1	2	1-AC	AC	SS	1	2	3	4	CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
Adopt entire CA chapter	Х																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.301.1							Х												
5.302.1 Definitions							Х												
5.303.2							Х												
Table 5.303.2.2							Х												
Table 5.303.2.3							Х												
5.303.4, Item 1 only							Х												
5.303.6							Х												
Table 5.303.6							Х												

CHAPTER 5

NONRESIDENTIAL MANDATORY MEASURES

Division 5.3 – WATER EFFICIENCY AND CONSERVA-TION

SECTION 5.301 GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

GRAYWATER. Untreated household waste which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom wash basins and water from clothes washing machines and laundry tubs. It shall not include waste water from kitchen sinks, dishwashers or laundry water from soiled diapers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water

budget developed based on landscaped area and climatological parameters.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the *California Plumbing Code*, Part 5.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [*Water Code* Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of this section, a dedicated meter may be considered a submeter.

WATER BUDGET. Estimated total landscape irrigation water use shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MLO).

SECTION 5.303 INDOOR WATER USE

5.303.1 Meters. Separate meters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:

- 1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day.
- 2. For spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop projected to consume more than 100 gal/day.
- **5.303.1.2 Excess consumption.** Any building within a project or space within a building that is projected to consume more than 1,000 gal/day.
- **5.303.2** Twenty percent savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the *California Building Standards Code*. The 20 percent reduction in potable water use shall be demonstrated by one of the following methods:
 - 1. Each plumbing fixture and fitting shall meet the 20 percent reduced flow rate specified in Table 5.303.2.3, or
 - A calculation demonstrating a 20 percent reduction in the building "water use baseline" as established in Table 5.303.2.2 shall be provided.

5.303.2.1 Multiple showerheads serving one shower. When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rates specified in the 20 percent reduction column contained in Table 5.303.2.3 or the shower shall be designed to only allow one showerhead to be in operation at a time.

Exception: The maximum flow rate for shower heads when using the calculation method specified in Section 5.303.2, Item 2 is 2.5 gpm @ 80 psi.

5.303.4 Wastewater reduction. Each building shall reduce by 20 percent wastewater by one of the following methods:

- 1. [DSA-SS] The installation of water-conserving fixtures (water closets, urinals) meeting the criteria established in sections 5.303.2 or 5.303.3 or
- Utilizing nonpotable water systems [captured rainwater, graywater, and municipally treated wastewater (recycled water) complying with the current edition of the California Plumbing Code or other methods described in Section A5.304].

5.303.6 Plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 5.503.6.

TABLE 5.303.2.2
INDOOR WATER USE BASELINE ⁴

FIXTURE TYPE	FLOW RATE ²	DURATION	DAILY USES	OCCUPANTS ³
Showerheads	2.5 gpm @ 80 psi	8 min.	1	X
Lavatory faucets nonresidential	0.5 gpm @ 60 psi	.25 min.	3	X
Kitchen faucets	2.2 gpm @ 60 psi	4 min.	1	X
Replacement aerators	2.2 gpm @ 60 psi			X
Wash fountains	2.2 [rim space (in.)/20 gpm @ 60 psi]			X
Metering faucets	0.25 gallons/cycle	.25 min.	3	X
Metering faucets for wash fountains	.25 [rim space (in.)/20 gpm @ 60 psi]	.25 min.		X
Gravity tank type water closets	1.6 gallons/flush	1 flush	1 male ¹ 3 female	X
Flushometer tank water closets	1.6 gallons/flush	1 flush	1 male ¹ 3 female	X
Flushometer valve water closets	1.6 gallons/flush	1 flush	1 male ¹ 3 female	X
Electromechanical hydraulic water closets	1.6 gallons/flush	1 flush	1 male ¹ 3 female	X
Urinals	1.0 gallons/flush	1 flush	2 male	X

Fixture "Water Use" = Flow rate × Duration × Occupants × Daily uses

- 1. The daily use number shall be increased to three if urinals are not installed in the room.
- 2. The flow rate is from the CEC Appliance Efficiency Standards, Title 20, California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
- 3. Refer to Table A, Chapter 4, California Plumbing Code, for occupant load factors.
- 4. Use Worksheet WS-1 to calculate base line water use.

TABLE 5.303.2.3 FIXTURE FLOW RATES

FIXTURE TYPE	FLOW RATE	MAXIMUM FLOW RATE AT 20 percent REDUCTION
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory faucets—nonresidential	0.5 gpm @ 60 psi	0.4 gpm @ 60 psi
Kitchen faucets	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi
Wash fountains	2.2 [rim space (in.)/20 gpm @ 60 psi]	1.8 [rim space (in.)/20 gpm @ 60 psi]
Metering faucets	0.25 gallons/cycle	0.2 gallons/cycle
Metering faucets for wash fountains	.25 [rim space (in.)/20 gpm @ 60 psi]	.20 [rim space (in.)/20 gpm @ 60 psi]
Gravity tank type water closets	1.6 gallons/flush	1.28 gallons/flush ¹
Flushometer tank water closets	1.6 gallons/flush	1.28 gallons/flush ¹
Flushometer valve water closets	1.6 gallons/flush	1.28 gallons/flush ¹
Electromechanical hydraulic water closets	1.6 gallons/flush	1.28 gallons/flush ¹
Urinals	1.0 gallons/flush	.5 gallons/flush

^{1.} Includes single and dual flush water closets with an effective flush of 1.28 gallons or less:

Single flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A 112.19.233.2.

Dual flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A 112.19.2 and ASME A 112.19.14.

TABLE 5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

REQUIRED ST	ANDARDS
Water closets (toilets) – flushometer valve type single flush, maximum flush volume	ASME A 112.19.2/ CSA B45.1 – 1.28 gal (4.8 L)
Water closets (toilets) – flushometer valve type dual flush, maximum flush volume	ASME A 112.19.14 and USEPA WaterSense Tank-Type High-Efficiency Toilet Specification – 1.28 gal (4.8 L)
Water closets (toilets) – tank-type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A 112.19.2/ CSA B45.1 – 0.5 gal (1.9 L)
Urinals, nonwater urinals	ASME A 112.19.19 (vitreous china) ANSI Z124.9-2004 or IAPMO Z124.9 (plastic)
Public lavatory faucets: Maximum flow rate – 0.5 gpm (1.9 L/min)	ASME A 112.18.1/CSA B125.1
Public metering self-closing faucets: Maximum water use – 0.25 gal (1.0 L) per metering cycle	ASME A 112.18.1/CSA B125.1
Residential bathroom lavatory sink faucets: Maximum flow rate – 1.5 gpm (5.7 L/min) ¹	ASME A 112.18.1/CSA B125.1

SECTION 5.304 OUTDOOR WATER USE

5.304.1 Water budget. A water budget shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

Note: Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at: http://www.owue.water.ca.gov/landscape/ord/ord.cfm.

- **5.304.2 Outdoor potable water use.** For new water service for landscaped areas between 1,000 square feet and 5,000 square feet (the level at which *Water Code* §535 applies), separate meters or submeters shall be installed for indoor and outdoor potable water use.
- **5.304.3 Irrigation design.** In new nonresidential construction with between 1,000 and 2,500 square feet of landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.
 - **5.304.3.1 Irrigation controllers.** Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:
 - 1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in

NONRESIDENTIAL MANDATORY MEASURES

- response to changes in plants' needs as weather conditions change.
- Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

SECTION 5.305 WATER REUSE SYSTEMS (Reserved)

CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

A 1:				HCD		DS	SA		OSI	HPD									
Adopting agency	BSC	SFM	1	2	1-AC	AC	SS	1	2	3	4	CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
Adopt entire CA chapter	Х																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.401.1							Х												
5.402.1 Definitions							Х												
5.402.1 ADJUST							Х												
5.402.1 BALANCE							Х												
5.402.1 TEST							Х												
5.407							Х												
5.408.1–5.408.3							Х												
5.410.1							Х												
5.410.1.1							Х												

CHAPTER 5

NONRESIDENTIAL MANDATORY MEASURES

Division 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL

5.401.1 Scope. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402 Definitions

5.402.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

BALANCE. To proportion flows within the distribution system, including submains, branches and terminals, according to design quantities.

BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

TEST. A procedure to determine quantitative performance of a system or equipment.

SECTION 5.403 FOUNDATION SYSTEMS (Reserved)

SECTION 5.404 EFFICIENT FRAMING TECHNIQUES (Reserved)

SECTION 5.405 MATERIAL SOURCES (Reserved)

SECTION 5.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE (Reserved)

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

5.407.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by *California Building Code* Section 1403.2 (Weather Protection) and *California Energy Code* Section 150, (Mandatory Features and Devices), manufacturer's installation instructions or local ordinance, whichever is more stringent.

5.407.2 Moisture control. Employ moisture control measures by the following methods.

5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings.

Notes:

- Use features such as overhangs and recesses, and flashings integrated with a drainage plane.
- 2. Use nonabsorbent floor and wall finishes within at least two feet around and perpendicular to such openings.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 Construction waste diversion. Establish a construction waste management plan for the diverted materials, or meet local construction and demolition waste management ordinance, whichever is more stringent.

5.408.2 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan for approval by the enforcement agency that:

- 1. Identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
- 2. Determines if materials will be sorted on-site or mixed.
- 3. Identifies diversion facilities where material collected will be taken.
- 4. Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

5.408.2.1 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 5.408.2, Items 1 thru 4. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Exception: [DSA-SS] Jobsites in areas where there is no mixed construction and demolition debris (C&D) processor or recycling facilities within a feasible haul distance shall meet the requirements as follows:

1. The enforcement agency having jurisdiction shall at its discretion, enforce the waste management plan and make exceptions as deemed necessary.

5.408.2.2 Isolated jobsites. The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

Notes:

- 1. Sample forms found in Chapter 8 may be used to assist in documenting compliance with the waste management plan.
- 2. Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.3 Construction waste reduction of at least 50 percent. Recycle and/or salvage for reuse a minimum of 50 percent of the non-hazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent. Calculate the amount of materials diverted by weight or volume, but not by both.

Exceptions:

- 1. Excavated soil and land-clearing debris
- Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist

5.408.4 Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

SECTION 5.409 LIFE CYCLE ASSESSMENT (Reserved)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATION

5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals.

5.410.1.1 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code.* Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

- **5.410.2** Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include:
 - 1. Owner's or Owner representative's project requirements
 - 2. Basis of design
 - 3. Commissioning measures shown in the construction documents
 - 4. Commissioning plan
 - 5. Functional performance testing
 - 6. Documentation and training
 - 7. Commissioning report

All building systems and components covered by Title 24, Part 6, as well as process equipment and controls, and renewable energy systems shall be included in the scope of the Commissioning Requirements.

- **5.410.2.1** Owner's or Owner representative's Project Requirements (OPR). The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:
 - 1. Environmental and sustainability goals
 - 2. Energy efficiency goals
 - 3. Indoor environmental quality requirements
 - 4. Project program, including facility functions and hours of operation, and need for after hours operation
 - 5. Equipment and systems expectations
 - 6. Building occupant and operation and maintenance (O&M) personnel expectations
- **5.410.2.2** Basis of Design (BOD). A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project, and updated as necessary during the design and construction phases. The Basis of Design document shall cover the following systems:
 - Heating, ventilation, air conditioning (HVAC) systems and controls
 - 2. Indoor lighting system and controls
 - 3. Water heating system

- 4. Renewable energy systems
- 5. Landscape irrigation systems
- 6. Water reuse systems
- **5.410.2.3** Commissioning plan. Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned and shall be started during the design phase of the building project. The Commissioning Plan shall include the following:
 - 1. General project information
 - 2. Commissioning goals
 - 3. Systems to be commissioned. Plans to test systems and components shall include:
 - a. An explanation of the original design intent
 - Equipment and systems to be tested, including the extent of tests
 - c. Functions to be tested
 - d. Conditions under which the test shall be performed
 - e. Measurable criteria for acceptable performance
 - 4. Commissioning team information
 - 5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning requirements listed in Sections 5.410.2.4 through 5.410.2.6 shall be included
- **5.410.2.4 Functional performance testing.** Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.
- **5.410.2.5 Documentation and training.** A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.
 - **5.410.2.5.1 Systems manual.** Documentation of the operational aspects of the building shall be completed within the Systems Manual and delivered to the building owner or representative and facilities operator. The Systems Manual shall include the following:
 - Site information, including facility description, history and current requirements
 - 2. Site contact information
 - Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log
 - 4. Major systems
 - 5. Site equipment inventory and maintenance notes

- 6. A copy of all special inspection verifications required by the enforcing agency or this code
- 7. Other resources and documentation
- **5.410.2.5.2** Systems operations training. The training of the appropriate maintenance staff for each equipment type and/or system shall be documented in the commissioning report and shall include the following:
 - 1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces)
 - 2. Review and demonstration of servicing/preventive maintenance
 - 3. Review of the information in the Systems Manual
 - Review of the record drawings on the system/ equipment
- **5.410.2.6 Commissioning report.** A complete report of commissioning process activities undertaken through the design, construction and reporting recommendations for postconstruction phases of the building project shall be completed and provided to the owner or representative.
- **5.410.4 Testing and adjusting.** Testing and adjusting of systems shall be required for buildings less than 10,000 square feet.
 - **5.410.4.2 Systems.** Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:
 - 1. HVAC systems and controls
 - 2. Indoor and outdoor lighting and controls
 - 3. Water heating systems
 - 4. Renewable energy systems
 - 5. Landscape irrigation systems
 - 6. Water reuse systems
 - **5.410.4.3 Procedures.** Perform testing and adjusting procedures in accordance with industry best practices and applicable standards on each system as determined by the building official.
 - **5.410.4.3.1 HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; or Associated Air Balance Council National Standards or as approved by the building official.

- **5.410.4.4 Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.
- **5.410.4.5 Operation and maintenance (O & M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.
 - **5.410.4.5.1 Inspections and reports.** Include a copy of all inspection verifications and reports required by the enforcing agency.

CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.5 – ENVIRONMENTAL QUALITY

				HCD		DS	SA		OSI	HPD									
Adopting agency	BSC	SFM	1	2	1-AC	AC	ss	1	2	3	4	CSA	DPH	AGR	DWR	CEC	СА	SL	SLC
Adopt entire CA chapter	Х																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							Х												
Chapter/Section																			
5.501.1							Х												
5.502.1 Definitions							Х												
5.504.3							Х												
5.504.4							Х												
5.504.4.1							Х												
Table 5.504.4.1							Х												
Table 5.504.4.2							Х												
5.504.4.3							Х												
5.504.4.3.1							Χ												
Table 5.504.4.3							Χ												
5.504.4.3.2							Χ												
5.504.4.4 and subsections							Х												
5.504.4.5							Х												
Table 5.504.4.5							Х												
5.504.4.6							Χ												
5.504.4.6.1, Item 2							Х												
5.504.5.3							Х												
5.505							Х												
5.506.1							Х												
5.508.1							Х												
5.508.1.1							Х												

CHAPTER 5

NONRESIDENTIAL MANDATORY MEASURES

Division 5.5 – ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

5.501.1 Scope. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS

5.502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber.

Note: See CCR, Title 17, Section 93120.1.

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2-1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per

weight of compound added, expressed to hundredths of a gram (g O3 /g ROC).

Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521(a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES

5.503.1 General. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the *California Energy Code*, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA Phase II emission limits.

SECTION 5.504 POLLUTANT CONTROL

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system.

5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air qual-

ity management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

TABLE 5.504.4.1
ADHESIVE VOC LIMIT^{1,2}
Less Water and Less Exempt Compounds in Grams Per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF.

TABLE 5.504.4.2 SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural Nonporous Porous	250 775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 Aerosol paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

TABLE 5.504.4.3

VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS^{2, 3}

Grams of VOC Per Liter of Coating,

Less Water and Less Exempt Compounds

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2012
Flat coatings	50	1/1/2012
Nonflat coatings	100	
Nonflat high gloss coatings	150	
Specialty Coatings	130	
Aluminum roof coatings	400	
Basement specialty coatings	400	
Bituminous roof coatings	50	
Bituminous roof primers	350	
Bond breakers	350	
Concrete curing compounds	350	
Concrete/masonry sealers	100	
Driveway sealers	50	
Dry fog coatings	150	
Faux finishing coatings	350	
Fire resistive coatings	350	
Floor coatings	100	
Form-release compounds	250	
Graphic arts coatings (sign paints)	500	
High-temperature coatings	420	
Industrial maintenance coatings	250	
Low solids coatings ¹	120	
Magnesite cement coatings	450	
Mastic texture coatings	100	
Metallic pigmented coatings	500	
Multicolor coatings	250	
Pretreatment wash primers	420	
Primers, sealers and undercoaters	100	
Reactive penetrating sealers	350	
Recycled coatings	250	
Roof coatings	50	
Rust preventative coatings	400	250
Shellacs:		
Clear	730	
Opaque	550	100
Specialty primers, sealers and undercoaters	350	100
Stains	250	
Stone consolidants	450	
Swimming pool coatings	340	
Traffic marking coatings	100	
Tub and tile refinish coatings	420	
Waterproofing membranes	250	
Wood coatings	275	
Wood preservatives	350	
Zinc-rich primers	340	

- Grams of VOC per liter of coating, including water and including exempt compounds.
- The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
- Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

- 1. Manufacturer's product specification
- 2. Field verification of on-site product containers

5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

- 1. Carpet and Rug Institute's Green Label Plus Program.
- 2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).
- 3. NSF/ANSI 140 at the Gold level.
- 4. Scientific Certifications Systems Sustainable Choice.

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 5.504.4.5.

TABLE 5.504.4.5 FORMALDEHYDE LIMITS¹ Maximum Formaldehyde Emissions in Parts per Million.

PRODUCT	CURRENT LIMIT	JAN 1, 2012	JUL 1, 2012								
Hardwood plywood veneer core	0.05										
Hardwood plywood composite core	0.08		0.05								
Particle board	0.09										
Medium density fiberboard	0.11										
Thin medium density fiberboard ²	0.21	0.13									

- Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333-96 (2002). For additional information, see California Code of Regulations, Title 17, Sections 93120 through 03120 12
- Thin medium density fiberboard has a maximum thickness of eight millimeters.

5.504.4.5.1 Early compliance. Reserved.

5.504.4.5.2 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

- 1. Product certifications and specifications
- 2. Chain of custody certifications
- 3. Other methods acceptable to the enforcing agency

5.504.4.6 Resilient flooring systems. For 50 percent of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 Collaborative for High Performance Schools (CHPS) criteria and listed on its Low-emitting Materials List (or Product Registry) or certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.

[DSA-SS] Documentation shall be provided that verifies that finish materials are certified to meet the pollutant emission limits.

5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

Notes:

- 1. CHPS Low-emitting Materials List may be found at www.chpregistry.com/live or http://www.chps.net/dev/Drupal/node/381.
- 2. [DSA-SS] Products certified under the FloorScore program may be found at: http://www.rfci.com/ int_FS-ProdCert.htm.
- 3. Products certified under the Greenguard Children & Schools program and compliant with CHPS criteria may be found at: http://www.greenguard.org/Default.aspx?tabid =135.

5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 8.

5.504.7 Environmental tobacco smoke (ETS) control. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and in buildings; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 Indoor moisture control. Buildings shall meet or exceed the provisions of *California Building Code*, CCR, Title 24, Part 2, Sections 1203 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.

SECTION 5.506 INDOOR AIR QUALITY

5.506.1 Outside air delivery. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 (Requirements For Ventilation) of the *California Energy Code*, CCR, Title 24, Part 6, or the applicable local code, whichever is more stringent, and Chapter 4 of CCR, Title 8.

5.506.2 Carbon dioxide (CO₂) **monitoring.** For buildings equipped with demand control ventilation, CO₂ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the current edition of the *California Energy Code*, CCR, Title 24, Part 6, Section 121(c).

SECTION 5.507 ENVIRONMENTAL COMFORT

5.507.4 Acoustical control. Employ building assemblies and components with Sound Transmission Coefficient (STC) values determined in accordance with ASTM E 90 and ASTM E 413.

5.507.4.1 Exterior noise transmission. Wall and roof-ceiling assemblies making up the building envelope shall have an STC of at least 50, and exterior windows shall have a minimum STC of 30 for any of the following building locations:

- 1. Within 1,000 ft (300 m) of right of ways of freeways.
- 2. Within 5 mi. (8 km) of airports serving more than 10,000 commercial jets per year.
- 3. Where sound levels at the property line regularly exceed 65 decibels, other than occasional sound due to church bells, train horns, emergency vehicles and public warning systems.

Exception: Buildings with few or no occupants and where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

5.507.4.2 Interior sound. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Note: Examples of assemblies and their various STC ratings may be found in the catalog of STC and ICC Ratings for Wall and Floor/Ceiling Assemblies.

SECTION 5.508 OUTDOOR AIR QUALITY

5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

5.508.1.2 Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE CHAPTER 7 – INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS

		SFM	HCD		DSA		OSHPD												
Adopting agency	BSC		1	2	1-AC	AC	ss	1	2	3	4	CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
Adopt entire CA chapter																			
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below	X		x				X												
Chapter/Section																			
702.1			Х																
702.2	Х		Х				Х												
703.1	Х		Х				Х												

CHAPTER 7

INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS

SECTION 701 GENERAL (Reserved)

SECTION 702 QUALIFICATIONS

702.1 Installer training. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

- 1. State certified apprenticeship programs
- 2. Public utility training programs
- 3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations
- 4. Programs sponsored by manufacturing organizations
- 5. Other programs acceptable to the enforcing agency

702.2 Special inspection. [HCD] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education

may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

- 1. Certification by a national or regional green building program or standard publisher
- 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors
- 3. Successful completion of a third party apprentice training program in the appropriate trade
- 4. Other programs acceptable to the enforcing agency

Notes:

- 1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
- 2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

[DSA-SS] The enforcing agency may require special inspection to verify compliance with this code or other laws that are enforced by the agency. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the enforcing agency, for inspection of the particular type of construction or operation requiring special inspection.

SECTION 703 VERIFICATIONS

703.1 Documentation. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified in the application checklist.

[DSA-SS] Verification of compliance with this code shall include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance. Where specific documentation is necessary to verify compliance, that method of compliance will be specified in the appropriate section.